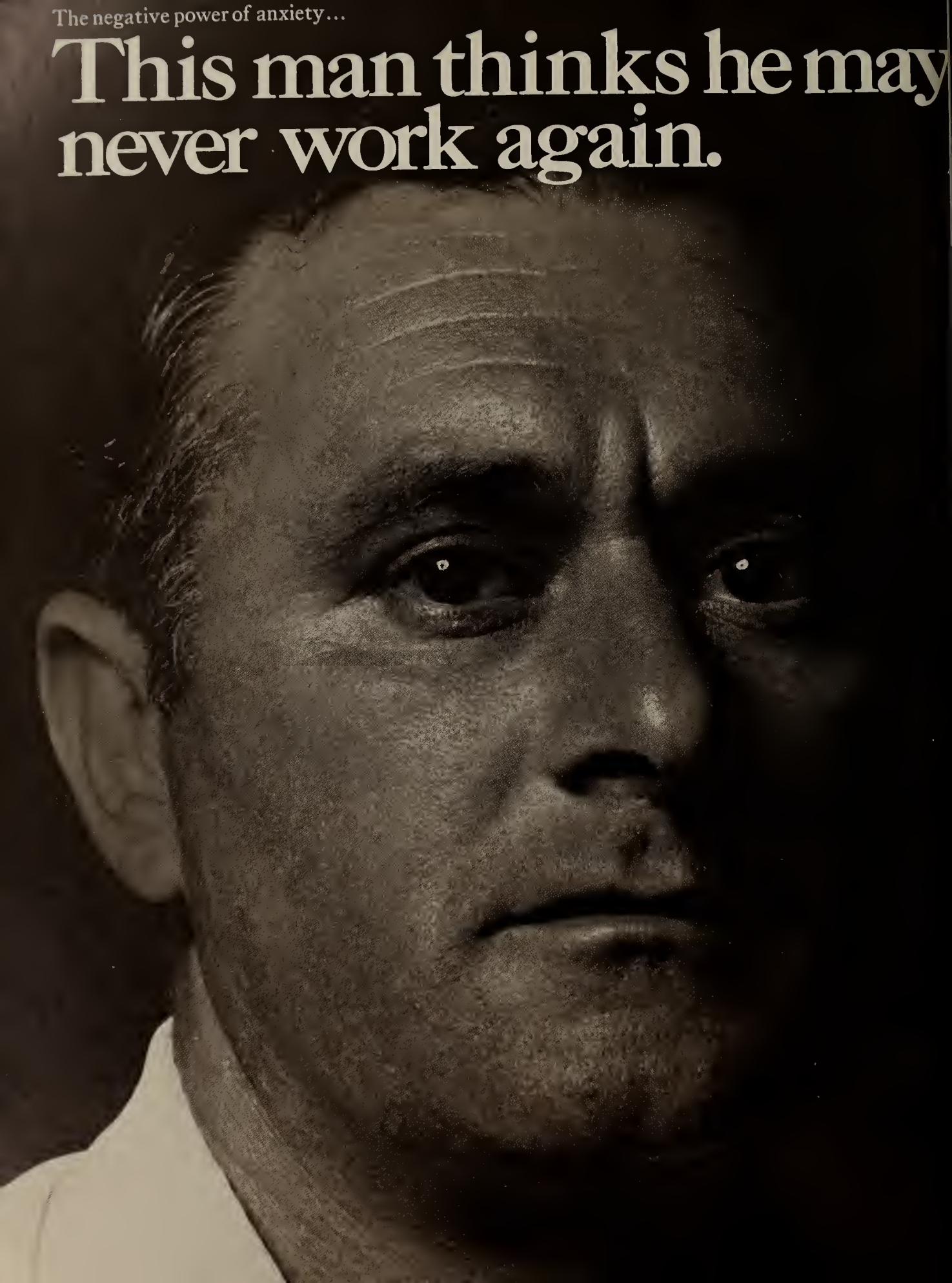
Medical Alumni Bulletin

HARVARD

Nov./Dec. 1970

The negative power of anxiety...

This man thinks he may never work again.



The patient who has had a myocardial infarction is usually advised by his physician to avoid emotional excitement. All too often his family, acutely concerned, transmits its anxiety to him, urging him to "rest, rest."

How anxiety may interfere

In a study of 336 males who had suffered at least one myocardial infarction, Sigler[1] reports that manual workers showed the lowest percentage of patients returning to work, compared to clerical workers, business and professional men. The author notes that in many cases the mere apprehension that "return to work would shorten life prevents the patient from resuming activities." It is also well known that emotional disturbance is probably the most common cause of cardiac disability in postinfarction cases.[1]

The anxiety factor in both *coronary* and *precoronary* patients has recently been discussed by Thomas,[2] who suggests: "Intensive investigation of the sources and kinds of anxiety, and how destructive forms of anxiety can be identified and relieved may be the next important step in the prevention of coronary heart disease."

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References: 1. Sigler, L. H.: *Geriatrics, 22*:(9) 97, 1967. 2. Thomas, C. B.: *Johns Hopkins Med. J., 122*:69, 1968.

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Contraindications: Patients with known hypersensitivity to the drug.

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HARVARD MEDICAL ALUMNI BULLETIN

VOL. 45 NOV.-DEC. 1970 NO. 2

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CONTENTS

COVER: This month's cover is artist Will Commerford's abstraction of Harvard Medical School's concern for the health of its neighboring communities. In this issue the *Bulletin* inaugurates a series on medicine in the community with articles by the associate dean of hospital programs at HMS and the directors of the Peter Bent Brigham Hospital. In the coming months, we will present articles from the various other Harvard affiliated hospitals.

CREDITS: Cover by Will Commerford; Courtesy of Peter Bent Brigham Hospital, pp. 5, 9, 10, 11; Courtesy of Model Cities, Cambridge and Boston, pp. 6, 12; Drawings by Ernest Craige '43A, pp. 13-15; Dick Lewis, pp. 22-23; Fabian Bachrach, p. 30; Courtesy of *The Boston Globe*, p. 31.

Harvard Medicine and the Community

by Sidney S. Lee, M.D. DR.P.H.
Associate Dean for Hospital Programs

A question frequently asked these days by students, visitors, and in formal surveys is "what are Harvard Medical School and its associated teaching hospitals doing in 'community medicine' or 'community health'?" For it has become fashionable indeed to view the Medical School and the teaching hospital as elements in our society that should be concerned with, and doing something about, the health of the community. Behind the question, of course, lies the implication that these institutions should, in addition to their traditionally perceived roles, be more responsive to the perceived needs of the community around them. In the quest for "relevance," a term frequently used just a short while ago, the institutions have been subjected to pressures both from within and from without.

Harvard's response to the need for change in the relation of the academic community to the world at large has been one of experimentation, adaptation, and concern.

To understand where we are in 1970 and where we might be in the future, it might be worthwhile to step back five years, before Medicare and Medicaid, to a time when the Harvard Medical School was acquiring a new dean, and assess where the School and its teaching hospitals were then. Looking backward to 1965, one would see a Medical School and a small group of associated teaching hospitals with a remarkable record of achievement. HMS has moved away from the pre-World War II era of being predominantly oriented to the teaching of clinical medicine through a generation of unprecedented growth and support of research with the evolution of large basic science departments, new interconnections between pre-clinical and clinical specialties, and a scientific output of high quality.

The teaching hospitals, each of which had begun as a small community hospital for the sick poor, had become large respectable institutions to which even the most affluent in society would turn in case of need. They had acquired substantial research components, grown in numbers of full-time staff and were highly regarded for their competence in meeting the needs of those who came to their doors.

To some, it seemed that the Medical School ranked the triad of responsibility as research, education, and patient care, rather than education, research, and patient care that had been the thrust of the previous generations. The hospitals presumably continued to view the sequence as patient care, education, and research — although this, too, was coming into question, as growing numbers of house staff concerned with the care of not very many more patients undertook formal research assignments. This also was viewed as evidence of a shift in priority.

Nevertheless, the associated teaching hospitals were, by 1965, providing more than half the inpatient care for the city of Boston, as well as a significant volume of care for residents of surrounding communities. In the case of special procedures, their constituency was much broader, in some instances, international in character. They all had large outpatient departments and emergency wards that served those who sought specific items of care and, to a lesser extent, the full range of medical services.

Almost all of the School's affiliates had developed relations, based upon patient care or educational commitments, with other hospitals or patient care institutions in the community. Thus, the Harvard services at the Boston City Hospital had developed relations in medicine with Mt. Auburn Hospital and the Cambridge Hospital, and, in surgery, with Faulkner and Cambridge hospitals. The Beth Israel Hospital assumed responsibility for medical care at the Hebrew Rehabilitation Center for Aged and the Recuperative Center. The Peter Bent Brigham Hospital was related to the West Roxbury Veterans Administration Hospital and the medical service at the New England Deaconess Hospital. The Robert Breck Brigham Hospital moved into the Harvard orbit with close affiliation to the Peter Bent Brigham. The Judge Baker Guidance Center had already moved from downtown Boston to a location adjacent to The Children's Hospital. A new center for burn therapy, funded by the Shriners, was being prepared to join the Massachusetts General Hospital complex.

The Beth Israel Hospital had initiated a home care program for chronically ill patients in the early 1950's. A Family Health Care Program had been launched at The Children's Hospital Medical Center in 1955, essentially to serve as a teaching vehicle, but including a defined population of low-income families.

By 1965, Massachusetts Mental Health Center, as part of a statewide program, had assumed responsibility for community mental health for a defined district. The Laboratory of Community Psychiatry, which had been a part of the School of Public Health, moved to the Massachusetts Mental Health Center and worked closely with various community agencies to improve the handling of emotionally disturbed segments of the population.

Transition

All of this rather massive effort was seen by many — and indeed by Harvard — as not fully responsive to the actual needs of a rapidly changing society. What was required was a look at the arrangements for providing primary care for the community as a whole. Little had been done to make care more accessible to long-forgotten segments of the population — to the poor, to the residents of the ghetto, to those whose patterns of health management had been disrupted and made obsolete by the "advances of medical science."

Upon assuming the deanship, Dr. Ebert, together with members of the faculty and staff, undertook careful review of the School's obligation and capabilities in this regard. Endowed with intellectual and physical resources of unusual breadth and penetration, Harvard was in a position to pursue experimentation in a deliberate attempt to effect change in ways that would not only benefit local residents of metropolitan Boston, but also would reflect upon policy and practice on a national scale. Local problems had to be viewed within the context of national events. Health care costs were rising everywhere; manpower was unevenly distributed and ill-prepared in terms of population and need. Health care planning had to be made a part of the organized effort of the University and its partner institutions.

This commitment to involvement has led to the development of a variety of programs over the past five years. Each contains different approaches to the general problem of how best to deliver care to specified populations.

New Directions

The first program specifically designed to provide comprehensive care to a defined population was initiated early in 1965 by the Beth Israel Hospital with the opening of its Roxbury Clinic. Under the initial leadership of Robert B. Berg '52, this program offers comprehensive care to children and to pregnant women residing in a group of census tracts in Roxbury, a community with a predominantly black population. More than 5,000 children are currently registered for care; an average of some 300 pregnant women are enrolled at any given time. Within six months this program will begin to accept the other members of the household for continuing care. The Family Health Care Program, based at The Children's Hospital Medical Center, includes members of the staffs of the Boston Hospital for Women and the Peter Bent Brigham Hospital, and is currently serving 535 families.

In 1967 what had formerly been a small Well-Child Clinic, conducted by the School of Public Health in a housing project in the Jamaica Plain section of Boston, blossomed as the Martha M. Eliot Family Health Center serving the population in some four and one-half census tracts in the area of Jamaica Plain adjacent to Roxbury. Under the initial leadership of Dr. Eva J. Salber and, more recently, Dr. Robert Rosenberg, and jointly sponsored by HMS, HSPH, The Children's Hospital Medical Center, and Boston Hospital for Women, this unit now cares for approximately 4,800 children and 80 pregnant women, and offers instruction in family planning. Cooperative arrangements with the Peter Bent Brigham Hospital permitted the addition of an adult general medical clinic last April. Psychiatric consultation is provided by

HCHP's Headquarters

the staff of the Massachusetts Mental Health Center and there is close cooperation with the City of Boston, Department of Health and Hospitals.

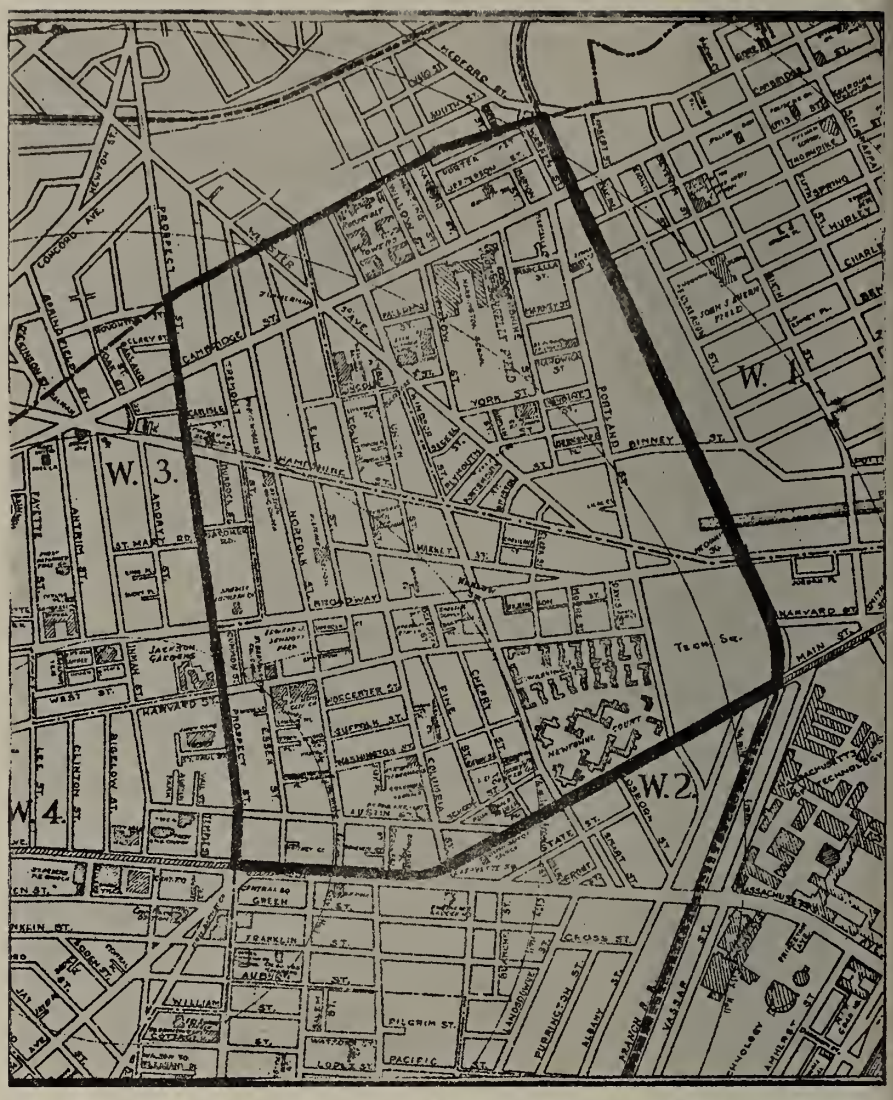
Meanwhile, the Massachusetts General Hospital was preparing to assume responsibility for primary care for the residents of Charlestown, a small, closely-knit community with a predominantly Irish-American population. The Bunker Hill Health Center was opened in 1968 under the leadership of Dr. John Connelly. By the summer of 1970, approximately half of Charlestown's total population of 16,000 was receiving care at this unit. One of Dr. Connelly's principal concerns is to extend the effectiveness of the physician through the development and use of pediatric nurse practitioners. Harvard medical students may now function as members of the health care team under a course given at the Center as part of the expanded elective schedule instituted in 1969-70.

Harvard's versatility in health care planning was extended in 1966 by the appointment of Dr. Leona Baumgartner as visiting professor of social medicine. When Dr. Baumgartner arrived at Harvard, she was asked by the City Manager of Cambridge — with Dean Ebert's blessing — to undertake a review of health services in that community. HMS had already established a

rather tenuous relation with the Cambridge City Hospital, but the question of where this institution should fit in the total pattern of services in the city, and what Harvard's role ought to be, was unresolved. Dr. Baumgartner's careful analysis of the local situation resulted in the recommendation that the Departments of Health, Hospital and Welfare be combined under a single commissioner and that he be given broad powers to combine all governmentally-operated medical and health services into one uniform system. The Cambridge Hospital was to function as the coordinating base.

On the basis of subsequent deliberations by Dean Ebert and his associates, it was decided to view the Cambridge Hospital as a community hospital within the Harvard orbit. Various Harvard departments had assumed responsibility for the basic staffing of the Hospital with a small core of full-time faculty in each of the major disciplines. At present, there are provisions for full-time staffing in medicine, surgery, pediatrics, pathology, psychiatry, and radiology. In Harvard's opinion, the Cambridge Hospital should not become a major teaching hospital in the image of those on the Boston side of the river, but should serve its community in relation to the broad sweep of common illnesses, making use of the major teaching hospitals for referral of patients with problems requiring special attention. Under the direction of Dr. Philip Porter, chief of pediatrics at Cambridge Hospital, small outreach centers have been established in two areas (in Area IV of the Model Cities Program and in the Riverside-Cambridgeport area), and a third is in process of formation in North Cambridge. Primary pediatric care is furnished by public health nurses under the supervision of the Hospital.

As one of his earliest moves, Dean Ebert invited Jerome Pollack to join the administrative staff of the Faculty of Medicine as associate dean for medical care planning. Professor Pollack has been responsible for organizing a program designed to deliver comprehensive, prepaid medical care on a group-practice basis to approximately 30,000 people from all walks of life. The Harvard Community Health Plan, as it is now called, commenced operation at its new headquarters in Kenmore Square on 1 October 1969. It is a unique organization in that its subscriber population is being recruited through the existing third-party carriers, Blue Cross/Blue Shield and the major commercial insurance companies, as well as through direct solicitation of Medicaid beneficiaries. As of 1 September 1970, the Plan had approximately 6,000 members. Mr. Robert Biblo, the program's executive director, predicts that enrollment will reach 30,000 by the end of 1971. A special facility has been established in the Parker Hill-Mission Hill area of Roxbury (the section from which the low-income component is drawn) to assist new subscribers and guide their entrance into the Harvard Health Plan system.



The Commonwealth Fund, the Ford Foundation, The Rockefeller Foundation, and the Surdna Foundation have been an enormous help in meeting the initial costs for this important venture. Efforts are now underway to determine how the prepayment organization created for this group-practice plan might be made available to other group practices in the metropolitan area. In this academic year, the Harvard Community Health Plan will begin to be used for the education of medical students and house staff.

Another quite different venture was initiated by the Board of Trustees of the New England Hospital in Roxbury. In the spring of 1968, the Board requested assistance from Harvard in determining its future course of operation. Dr. Sidney S. Lee, associate dean for hospital programs; Dr. Alonzo S. Yerby, professor and head, department of health services administration, Harvard School of Public Health; Leonard W. Cronkhite, Jr. '50, general director, Children's Hospital Medical Center; Mr. George Lunn, director of personnel, Children's Hospital Medical Center; and Mr. Jack Kasten, former director of clinical services at the Beth Israel Hospital, acted as members of a steering committee. In 1969 the Hospital closed its inpatient services and became the Dimock Community Health Center, a nine and one-half acre health-related campus in the heart of Roxbury. Mr. Robert Morgan, formerly assistant to the Dean and staff director of Harvard's Commission on Relations with the Black Community, is general director of the Center. Housed on the campus are ODWIN (Open the Doors Wider in Nursing, Inc.), a dynamic organization committed to the entry of minority groups into the nursing profession at all levels; Health Careers, Inc., concerned with assisting entry of minority groups into other health professions; the Beth Israel's Roxbury Clinic (referred to earlier), which had outgrown its former quarters; a day care center for pre-school children operated by the Ecumenical Center; the Roxbury offices of the Visiting Nurses Association of Boston; Job Improvement Service, Inc., which offers counselling and testing services under guidance from the Beth Israel department of psychiatry; and the Health Student League, a student group concerned with promoting improved medical care of the indigent. In 1970 a regional vocational training school was launched with close cooperation from the teaching hospitals. It is anticipated that under this program some 500 to 800 people will be trained each year for entry into various health-related occupations. The Harvard School of Dental Medicine is staffing a dental clinic to operate as part of Dimock's new Adult Health Program.

Interfaculty Collaboration

To give proper direction to Harvard's participation in health care planning, an interfaculty center for study and experimentation was organized in 1967 at the instigation of Dean Ebert and Dean Snyder of the School of Public Health. Based at the Medical School, the Harvard Center for Community Health and Medical Care serves as a medium for interrelating the growing number of disciplines concerned with the organization, financing, and distribution of medical and health care. Led by Dr. Paul M. Densen, the core staff consists of scholars from the fields of economics, biostatistics, the behavioral sciences, medicine, and public health.

A chief aim of the Center is to develop accurate measures for testing the effectiveness of model programs (such as the Harvard Community Health Plan) in improving the efficiency of services and the health status of populations they are designed to serve. It is envisioned that continuous evaluation of the quality of services, the extent to which they meet the needs of target populations, costs incurred, and so forth, will yield principles that can be applied generally to the organization of services at regional and national levels.

Concurrent with the development of theoretical and practical knowledge has been the preparation of postgraduate physicians for positions of leadership in the policy formation and management of community health programs. A fellowship program has been instituted for physicians, in early stages of their careers, to impart a comprehensive understanding of the social, economic, organizational, and technological facets of health care delivery.

A Look Ahead

All of these efforts have been taking place in the context of full and open communication with agencies of local government and neighboring medical schools. Since 1966 there have been regular bi-weekly meetings of the deans of the medical faculties of Tufts, Boston and Harvard Universities, and the Commissioner of Health and Hospitals for the City of Boston. Through this medium, it is possible to avoid overlap and duplication of effort as well as to share both problems and progress. In this regard, Boston is well ahead of the other large cities of America with multiple medical schools. We are, indeed, striving toward a consistent approach to issues in community health.

Other developments will be taking place in the months to come. By the time this issue of the *Bulletin* appears, the first of a series of proposed neighborhood health care units will have been launched by Health, Inc., a new non-profit organization established under the direction of Leonard W. Cronkhite, Jr. '50, general director of The Children's Hospital Medical Center, with the cooperation of other Harvard teaching hospitals and local business and industry. Health, Inc. represents a major effort to bring personal and preventive services to an urban population through an enterprise that operates under a single management. Beth Israel and Peter Bent Brigham hospitals have been conducting active discussion with administrators of the Model Cities program regarding health care in the Model Cities neighborhoods. The Massachusetts General Hospital, with its Bunker Hill program well under way, is contemplating other dimensions of community service.

As activity proceeds, the School looks forward to new opportunities to guide innovation in community health planning, and to broaden the education available to Harvard medical students through the incorporation of model delivery systems into the formal teaching program.

The Brigham and the Community

by William E. Hassan, Jr. PH.D., LL.B.
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Andrew G. Jessiman, M.B., B.CH., M.P.H.
Associate Director, PBBH

At its opening, the Peter Bent Brigham Hospital, like the majority of teaching hospitals in urban settings, was charged with the responsibility of providing care for the population, often indigent, that lived in its immediate neighborhood. To these people it was their community hospital.

Over the years, while still continuing to care for the local population, the character and nature of the Hospital underwent a slow process of change under such powerful influences as its association with the Harvard Medical School, the specialized clinical interests of its staff, and the new types of care that its research programs made possible. By the end of World War II, the Hospital prided itself on three main spheres of interest — excellence of patient care, teaching, and research. The majority of patients coming to the clinics were referred to specialty clinics. The high degree of specialization of the staff attracted patients from far afield for complex heart, brain, endocrine, and kidney problems; and its research programs, which would lead to major advances in medicine, were in full swing. Students and residents trained in the Hospital envisioned their life patterns in specialization, and, on completion of their training, sought positions in academic and research medicine.

The urban teaching hospital was scarcely aware that sociologic and population changes were already afoot in the city around it, bringing new and compelling pressures to bear both on the hospital's mission in society at large, and on its role in the local community in particular.

The population of the core of the city began to change; the middle class and "blue collar" working families moved to the suburbs, and their place was taken by a population — largely black or Spanish-speaking — coming from outside the state. These new residents of Dorchester, Roxbury, Jamaica Plain, and the South End came with a high incidence of substandard health and nutrition and, through lack of availability of adequate housing, lived in conditions of overcrowding and poor sanitation. The level of public health diminished steadily. As the magnitude of the health problems of the Inner City increased, the number of practicing family doctors in these urban communities decreased. Older doctors died; more and more physicians moved to the good life of the suburbs; the medical schools graduated new young doctors interested in working in the urban community, but virtually none were black or Spanish-speaking; hence, the family doctor became a rare animal close to extinction. Faced with poor health, the community had only one resource for medical care: the emergency room of the nearest hospital.

Thus, our urban teaching hospital, the Peter Bent Brigham, found itself faced with the responsibility of providing primary health care for its neighborhood community, a task it had always performed through its clinics, emergency room, and in-service care, but which now had assumed new dimensions of magnitude and, for the first time, political overtones. To meet this new challenge, the Hospital had to shift gear, and action was soon seen in the following areas.

Internal Informational and Educational Program for the Hospital Health needs voiced by the community and demographic information on the local population were presented at staff conferences. Groups of Trustees visited local community health centers, met with members of the Citizen Health Advisory Committees, and were shown the services being provided. Orientation programs were organized for the staff of the clinics and the emergency ward, the traditional interface between the hospital and the community, in which administrative staff, secretaries, nurses, and doctors were taken on tours of Jamaica Plain and Mission Hill, and visited operating health facilities such as the Harvard Community Health Plan and the Martha Eliot Health Center. At community meetings, residents were invited to visit the Hospital; many accepted and attended work meetings of the Office of Community Medicine, lunched with the staff, and afterwards were taken on guided tours.

Trustees, medical staff, and hospital administration alike were quick to recognize the need for increased responsibility for health provision, and the implementation of health programs in the community. The Trustees approved of the Hospital's commitment to these community programs. The medical staff offered professional support and willingness to staff community endeavors, while the administration offered management expertise and money for staffing.

Working Health Partnership with the Community An Office of Community Medicine was staffed, whose central task was to meet the community, listen to and respond to its requests for help to provide its health needs, and to furnish staff support in the community to help it

develop into an active, progressive, political force for health care. While the Office of Community Medicine worked with Jamaica Plain, the Hospital (through the Harvard Community Health Program) worked with the Mission Hill — Parker Hill community.

The Hospital recognized that the key to developing health services in neighborhoods is the residents themselves: only in planning with consumers can relevant medical care progress be developed; only through consumer involvement in policy-making can programs remain responsive to the needs of the community they serve. For this reason, one of the aims of the Office has been to stimulate community appreciation of health care, and to develop representative community groups who can articulate their health needs, plan with professionals, and determine the policy of their own health facilities.

The development of a partnership between the Hospital and the community has not been easy. Time — so essential if dialogue between the two groups is to be based on trust and mutual understanding — is often wedged between the urgent needs of the residents and the difficulty the Hospital has in moving to meet them. We have learned that our needs may not be the same as the community's, and that the community must be allowed the time to make its own decisions. Since choice insures high quality care, this Office has tried to present all alternative methods of providing health care to the neighborhood, so that decisions reflect the kinds and style of services desired. Once choices have been made, the Hospital has tried unremittingly to see them realized.

It can be said that the Peter Bent Brigham has developed a symbiosis with the Jamaica Plain community. As community unity and cohesiveness has developed to its final culmination — the Jamaica Plain Wide Health Committee — so the Hospital's involvement and sense of commitment has widened and deepened. Both have learned and profited from each other, and a sense of trust and mutual involvement has resulted.

Collaboration in City-wide Health Planning In the fall of 1969, the Commissioner of Health and Hospitals, Dr. Andrew Sackett, called together the health providers of the city from both public and private sectors. It was proposed that if each organization would accept the responsibility for the development of health care for a defined geographic area, all areas of the city would be covered by a health care system. In response to this appeal, the Peter Bent Brigham, working with its sister institutions — The Children's Hospital Medical Center, the Boston Hospital for Women, and the Massachusetts Mental Health Center — accepted responsibility to help plan and provide primary health care services for the Jamaica Plain and Mission Hill — Parker Hill areas. In the summer of 1970, Leonard W. Cronkhite, Jr. '50, general director of CHMC, announced a further plan, Health, Inc., to provide health services through a network of neighborhood health centers and back-up hospitals. The Peter Bent Brigham, as a member of the Affiliated Hospitals Center, at once agreed to serve as a sponsor and work as a back-up resource to his plan.

Education of Physicians to Provide Family Medicine in the Community Two elements are involved: the training of the family medicine specialist or physician who would make a life career in community medicine; and the training of black physicians who could work in the black community.

In the summer of 1968, we sent representatives to Howard and Meharry Medical Schools to arrange a rotation of these students through the teaching programs of the Hospital. As a result, students from both universities have been working side by side with Harvard students on the wards and in the research laboratories. Over the years the individual service departments of the Hospital have welcomed the applications made by minority groups to the various training programs and to the medical staff. In order to insure a positive approach to the selection of black applicants, black physicians have been placed on the internship selection committee and, as a result of these efforts, the Hospital has two black physicians on the senior staff and one black physician in the internship program. This may sound

Dr. Harold May, director of Community Medical Care Programs.

like slow progress, but progress it is, and welcome indeed.

Through the Family Health Care Program the Hospital, for the past eight years, has collaborated with The Children's Hospital Medical Center and the Boston Hospital for Women to provide a learning experience in the delivery of primary health care to medical students and residents. Additionally, fellows in the Program have been able to spend a year working in the field of family medicine, and doing research in social medicine under the direction of the Program staff. The Family Health Care Program provides continuous and comprehensive care for 500 families totalling 2,500 to 3,000 people. The enrollees come from within three miles of the Peter Bent Brigham Hospital and The Children's Hospital Medical Center. With a team of pediatricians from Children's, an obstetrician from the Boston Hospital for Women (Lying-in Division), and an internist from the Peter Bent Brigham, preceptorship is given to Harvard medical students who directly care for this population. Care is provided by assigning these families to students, the student acting as the physician. Care is on a 24-hour basis, with the students participating as in a group practice.

To encourage physicians to enter the field of community or family medicine, the Hospital, collaborating with The Children's Hospital Medical Center, has developed a Family Medicine Training Program. Physicians are specifically prepared to practice and teach primary medical care. Depending on his internship (straight pediatrics or straight medical) the resident can be certified by the new Board of Family Medicine, and either the American Board of Pediatrics or the Board of Internal Medicine. This Program has trained key personnel for many of the newly developed community efforts such as the Model Cities Program, Harvard Community Health Plan, Health, Inc., and the Martha Eliot Health Center.

With these introductory remarks as a background, the Peter Bent Brigham's involvement and service to the community can be described in the following programs.

Nurse coordinator of the Home Care Program talks to patient in his home.

The Clinics and Emergency Service These units are continually available as a health resource for the community. The Clinics (medical and surgical) attend to over 60,000 visits per year. In 1961 the medical clinic system was changed to permit each patient to have his own doctor each time he attended the clinic — exactly as in private practice. This permitted the physician, working in the clinic over a period of years, to develop his own panel of patients; more important, it permitted a 1-to-1 doctor-patient relation to be established — a very rare phenomenon in a hospital clinic system. The emergency room attends to over 25,000 visits per year. For reasons already discussed the rate of emergency attendance is growing rapidly, 16 percent annually since the building of the new emergency room in 1966. On weekends between 80 and 100 patients are seen and treated daily.

The Home Care Program In 1967 a Home Care Program began operation, modeled after the programs at the Montefiore Hospital in the Bronx and the Beth Israel Hospital in Boston. Staffing for this project consists of three part-time internists who act as the physicians, a public health nurse who acts as a nurse-coordinator, a social worker and a part-time nutritionist. Ongoing nursing is provided by the Visiting Nurse Association and, if necessary, the patient's house or room is adapted to permit patient care to be provided there. During the last year, the Program accepted 75 admissions and, at any one time, had 35 people on the project. Over 13,500 days of patient care were provided and some 4,500 home visits made.

The Discharge Planning Service This program is staffed by four nurses, a part-time dietitian, and a secretary working in close collaboration with the Social Service Department. It interviews and assesses over 1,300 patients on the wards of the Hospital for discharge planning, be that placement in a nursing home, extended care facility, chronic hospital, or return to home with visiting nurse follow-up. Of these patients, the service ultimately places some 600 patients each year in appropriate nursing facilities. Once placed, the patient is closely followed by the Discharge Planning team and is seen by a nurse from the office at each visit made to the clinic.

The Discharge Planning Service has a close working relationship with those nursing homes and extended care facilities in the com-

munity — some 15 in all — with each of which the Hospital has transfer agreements. The Hospital provides consultation services in social service as well as dietetics to many of these homes on an on-going basis. Nursing supervisors from these homes are invited to monthly educational meetings in the Discharge Planning Office.

Roxbury Federation Neighborhood Center In a collaborative venture with the Roxbury Federation Neighborhood Center, the Peter Bent Brigham Hospital dietetic department provides consultation to this community organization, particularly in the area of therapeutic dietary follow-up. The Roxbury Federation Neighborhood Center provides to the aged in the community various types of dietetic services such as "Meals on Wheels," group meals in the Center itself, and dietetic advice to the elderly in their homes. The success of this program in Roxbury led to the department giving a "Meals on Wheels" workshop this summer in collaboration with the Brookline Multiservice Senior Center, which was attended by approximately 100 dietitians and community workers.

Collaboration with the Martha Eliot Health Center The Martha Eliot Health Center is situated in the Bromley Health housing project in northern Jamaica Plain. Funded through the Children's Bureau, it is responsible for the provision of care in four and one-half census tracts to children up to the age of 21, pregnant women, and mothers for the first postpartem year. The total population in this area is 17,000, and enrollment at the Center is 6,000.

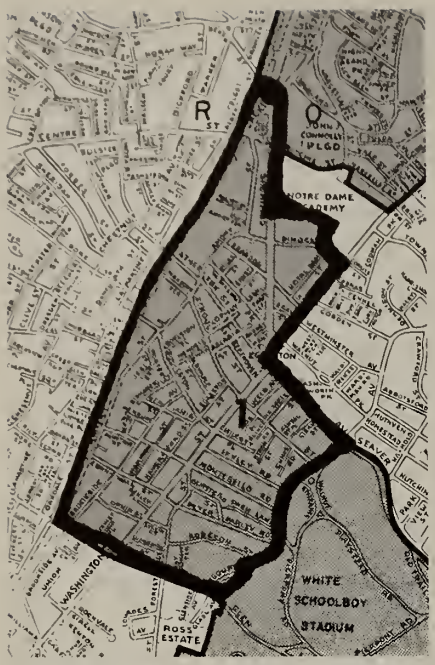
With the Center besieged by continuing requests for adult services, meetings were held with the Health Advisory Committee of the Center, the Martha Eliot staff, and Peter Bent Brigham personnel to determine how such services could best be provided. In April 1970, under the auspices of the Brigham, adult services were first undertaken at the Martha Eliot Health Center. The community use of this Clinic has been gratifying. The Clinic, starting with one session per week staffed by one doctor, has had a steadily increasing patient census until, at the present time, four physicians are required to staff the Clinic. It is proposed to expand this service in keeping with developing needs.

The Model Cities (Area I) Family Life Center in Jamaica Plain The Family Life Center began operation in August 1970. Planning by and between the Model Cities Administration, the Health Advisory Council of the Area, The Children's Hospital Medical Center, the Boston Hospital for Women, the Massachusetts Mental Health Center, and the Peter Bent Brigham Hospital had been in progress for two and one-half years prior to the opening. Initially, services were (and still are) being offered in a series of trailers, but within a few months, an interim Life Center will be opened in the basement of Our Lady of Lourdes Church, centrally located in the area. This interim site will be used for approximately a year while a permanent site is remodeled and made ready for use. On 10 September 1970, a contract was signed between the Hospital and the City of Boston to provide adult services for this population of some 10,000 people.

The Harvard Community Health Plan On 1 October 1969, the Nation's first university-sponsored prepaid group practice, the Harvard Community Health Plan, opened the doors of its modern ambulatory health center in the Kenmore Square section of Boston. Designed to find new and improved methods to organize, finance, and provide health services, and to expand medical, educational and research opportunities, the Plan has a target population of 30,000 members. As of 1 October 1970, between 6,000 and 7,000 were enrolled.

The Peter Bent Brigham Hospital has joined with Harvard Medical School, Beth Israel Hospital, Boston Hospital for Women, The Children's Hospital Medical Center, Massachusetts Blue Cross, the private insurance industry, and federal and state governmental health agencies in this important effort to develop a system in which comprehensive, high quality services could be offered to a broad cross-section of the community, while at the same time controlling more effectively than in the current system the costs of such services. A particularly intense effort has been made to make the Harvard Community Health Plan available to the 12,000 residents of one low income community, the Mission

Physician at Martha Eliot Health Center examines a patient.



Model Cities — Area I — Boston

Hill — Parker Hill neighborhood. The community has selected a Center, located in its area, to serve as the focal point of Plan-related activities.

The Plan has successfully negotiated a contract with the Massachusetts Department of Public Welfare to make its services available to Medicaid recipients from Mission Hill — Parker Hill. More than 50 percent of the families who are on public assistance from this community have joined the HCHP, and are receiving their health care in this comprehensive program. Additional funding through Medicare and the USPHS will make it possible for virtually anyone in the entire Mission Hill — Parker Hill community, who so elects, to join the Plan within the next few months on a prepaid basis.

Drug Rehabilitation Coordinating Unit Through the combined efforts of the United Community Services of Greater Boston and Peter Bent Brigham, a Drug Rehabilitation Coordinating Unit has been established at the Hospital. This unit is aimed at coordinating efforts to provide the most comprehensive medical service and continuity of care outside the Hospital to those drug-abusing individuals who come for care.

There are two major emphases to this program. The first is to educate the medical and nursing staff regarding the problems of drug abuse and drug addiction from social, psychological, pharmacological, and medical points of view. Second, through the community liaison member of the staff, efforts are made to coordinate the medical care of drug-abusing individuals in the Hospital with services at the community level when they leave for further attendance at half-way houses, in rehabilitation programs, in drug-training programs, and in other rehabilitative settings. Coordination with all major specialties in the hospital that are relevant, such as social service and psychiatry, will soon be forthcoming. The medical service has two beds available for detoxifying drug-abusing individuals. Thus, a viable program of inpatient, outpatient, and community services has been established to assure maximal comprehensive and continuous care for drug-involved patients at the Peter Bent Brigham Hospital.

Youth Volunteer Opportunities For the last three years, the Peter Bent Brigham Department of Volunteers, in cooperation with Action for Boston Community Development (A.B.C.D.) and the Parker Hill — Fenway Area Planning Action Council (A.P.A.C.), has provided summer work experiences for 14- and 15-year-old youths from the neighborhood surrounding the Hospital.

An average of 20 young people, some of whom continue working after school throughout the winter months, are screened by A.P.A.C. and channeled by the Volunteer Department to various Hospital areas where the youths are trained and supervised for an eight-week period.

The goal of this joint effort is to give these young people, who otherwise would have no constructive enterprise during their summer vacations, an opportunity to stimulate their interests, to develop skills, and to be somewhat prepared for the working world once they are ready to enter it.

Job Training Programs Since 1954 the department of pathology has trained community residents, with no prior knowledge of the field, to become dieners and histology technicians. Many who have graduated from this program have now assumed supervisory positions in laboratories both in this Hospital and in other hospitals within the city.

Since the opening of the Health Vocational Training Program at the Dimock Community Health Center, the department has acted as faculty for the histo-physiology technician teaching program. In addition, other members of the Hospital administration have acted as faculty for various job training programs at the Dimock Center; and groups of students from the Center have been brought to the Hospital for their orientation sessions.

All these programs provide a vignette of how one teaching hospital in the Harvard family is facing the challenge of working with the community to take medicine into the Inner City. A commitment by the Hospital and a growing trust by the people has resulted in the development of a fruitful, working relationship with the community. A willingness has been shown to plan and work with city and state authorities for the provision of a comprehensive health care system. Teaching programs have been implemented to encourage young physicians to enter the fields of family and community medicine. The process of adding a new dimension to the mission of the Hospital must, perforce, be gradual, but, once on its way, will continue. Much remains to be done, but, at the Peter Bent Brigham Hospital, a beginning has been made.

Acknowledgments

The writers gratefully acknowledge the assistance of Dr. George W. Thorn, Francis D. Moore '39, Joseph L. Dorsey '64, Joel J. Albert '56 — and all the Peter Bent Brigham staff.

The CAT as Educator

by David Seegal '28 and Beatrice C. Seegal

In these days when educational goals and methods are being subjected to critical and often heated scrutiny by retired college presidents, parent-teacher and neighborhood associations and politicians of every persuasion, there is the possibility that an important adjunct for the improved teaching of the young is being overlooked. This aid is not concerned with the proper division of curricular hours for scientific or classical studies, but with a common source of pedagogy within the average household, namely the 23 million family cats in the United States. Maturation, wisdom, and preparation for advanced standing in the human race may depend on inherent qualities already stamped out on one's genetic name plate. But insofar as educative factors play a role in human development, living with and learning from the cat can prepare the young person for many of the vagaries of life's placid and stormy courses.

On balance, the educational potential of the cat for man far outweighs that of the dog. This viewpoint is certain to reopen the ancient cat versus dog controversy. But we are begging off from a discussion of the wider aspects of the problem and limiting our inquiry to a purely educational question: What are the qualities of the average cat that can assist the child to meet successfully the manifold demands of human intercourse? There can be no doubt that the dog contributes greatly to the joys of man, but does it prepare its master for some of the more trying, unhappy experiences in life? It is regrettable to have to say "no." By contrast, the cat as a pedagogue is an uncompromising realist; the child student observing the cat's manners and management of both feline and human problems can gain immeasurably in perspective and judgment. In defense of this belief, certain common qualities of *felis domestica* can be shown to be applicable to human usage. It is proposed to examine the thesis that many of the qualities and values that characterize man are highly developed in the average cat. Propinquity with the cat thus offers a treasure of useful pedagogy for the impressionable, developing child.

Egocentricity of cat and man Each man is adept at defending his own self-interest, or, in less gracious terms, his egocentricity. However, most of us are less than generous about, and sympathetic to, this quality in other people. How are our young being trained to meet the natural varities of egocentricity in *others?* Certainly not by being brought up with a dog who bends to each whistle and gesture of its youthful master. By contrast, consider the cat's masterful egocentricity and dedication to self-interest. What mere man is there so bold or untutored as to believe that he can easily modify this attribute? The thoughtful cat rarely makes a move unless it is to its advantage. It demands its favorite foods, special place on the sofa, rest periods, and freedom from importunate hands. When the young person being brought up by a cat views this performance, he may become better prepared to understand this very human quality of total egocentricity.

Exposure to feline egocentricity may seem a harsh form of training for the child, but it is consistent with the sharper discipline now suggested by many professional and amateur pedagogists. Learning to live with the egocentricities of others is a social necessity. Who better than the cat can so impress the immature child with the dominance of human self-interest; certainly not the anxious parents, the doting grandparents, or even the teacher brimming with good will.

The cat as an egocentric, however, possesses certain saving graces. It is remarkably appreciative of the self-interests of others. It does not trespass upon their rights, provided its own requirements are adequately satisfied. It is neither an evangelist nor a dog in the manger. Furthermore, the cat has a highly sophisticated sense of gratitude that is not dispensed freely or without merit. All human beings well trained by a cat soon become aware of the upturned head and moderately warm, if not smug, gaze that the cat bestows on its provider following the first taste of an especially delectable dish. This form of "thank you" would be duly welcomed by parents of youngsters developing in the progressive schools of today. Watching the cat express its simple, though eloquent, form of appreciation may introduce the child to a gesture of gratitude; this beginning of "thanks" may surprise yet comfort the parents.

Cat as a nonconformist In recent years there is scarcely a college

campus that has not been the source of a decanal address, a lecture, or a debate bearing on the problem of conformity. There has been clamor from many sources for the reaffirmation of the independent, nonconforming mind. In this respect the cat has an impressive record. Observe the feline independence of action. Among themselves each cat exhibits variations in its approach to such activities as hunting, eating, sleeping, and playing. A cat's independence is also clearly expressed in relationships with its human associates. Does the cat conform to standards of living that do not suit its fancy? Rarely, if ever. When forced to live in an apartment, it may accept certain hygienic rules, but to suit its convenience, it will devise others. For example, many cats may use the bathtub in a most appropriate fashion, with simple duties performed with great accuracy over the drainpipe.

A cat likes some people and dislikes others. When visitors arrive it inspects the company and assigns each member to a hierarchal position. If a cat wishes no part of you, its resistance is unmistakable.

It is for others to determine whether conformity or nonconformity is the proper watchword for this generation, but if the child is to learn from watching an independent, nonconforming animal, the cat is a superb teacher.

The desire for privacy by cat and man Privacy is a paramount need of man. Social, economic, and age distinctions seem to play only minor roles in his quest for being alone when and where he wishes. Human beings may evidence a fearsome mien when their privacy is disturbed. It is imperative that the developing child learn to appreciate and respect other people's desire for privacy. Under usual circumstances he receives this pedagogic assistance through the pleas or chastisements of his parents and teachers, but there is another helpful pedagogist available in the form of the household tabby. When a cat wishes privacy, it gets it. Let the child try to disturb the resting or sleeping animal and he may first be rewarded with a disdainful glance; this may be followed by a withering glare, and if this gesture is ineffective, the front paw will punctuate the cat's victim. The inquiring child soon learns that privacy is precious to the cat. Later the child will come to realize that this state is indeed as warmly prized by his human associates. The dog's compassionate mood makes it a poor tutor in this respect. Fido may be exhausted from running in the fields, his paws sore from gravel and brambles, and his cold body just beginning to thaw before the fireplace, but if young hopeful comes dashing into the room and seeks Fido's company, Fido will willingly sacrifice his privacy and diligently drag his aching body over to the demanding child for further play. This scarcely gives the child proper estimate of the paramount human need and desire for privacy.

Pursuit of excellence by cat and man Educators agree that there is no substitute for excellence in academic performance. The cat strives for excellence in performing the responsibilities of motherhood, stalking prey, grooming its coat or assuming dramatic and graceful poses on appropriate pieces of furniture. The cat has an unusual capacity for concentration, flexibility of method, and perseverence. Even the young kitten, playful and often seemingly distractable, will generally display a useful stick-to-itiveness to the special project under way.

It cannot be denied that by observing certain breeds of working dogs, such as the retriever or sheep dog, the child can also absorb the values of concentration and fidelity that lead to excellent performance, but these are types of animals not generally advisable for the urban apartment. The cat provides the child with an extraordinary opportunity to observe the feline insistence on order, cleanliness, quiet, excellent performance as a hunter and protector of its young and of itself from the predatory or repugnant activities of others.

Cat's and man's need for relaxation Much has been said about the frenzied pace of modern life and the need for man to learn the art of relaxation. This notion may be open to question, but in its capacity to alternate periods of relaxation with those of work the cat offers a poignant lesson for man. When, for example, a cat hunts, it concentrates completely on the quest — no dilly-dallying. But when its labors are completed, the feline capacity for true relaxation is exemplary. Merely watching a cat in graceful repose can bring comfort to adult and child alike, even if they cannot fully learn the cat's secret for doing nothing when nothing is to be done.

Cat's capacity for adaptability One criterion of protoplasm is its capacity for adaptation. Man has used this quality to support himself from earth to moon, and to develop a multitude of ways of life. The cat could not have survived through periods of adoration and vicious cruelty if it were not for its remarkable synthesis of firmness and flexibility. The cat, like most human beings, resists change and can be as disturbed as most husbands are by a wife's experiments in rear-

rangement of furniture, but after an initial show of surprise or disfavor, *felis domestica* often exhibits a more receptive attitude to a changing domestic arrangement than its human counterpart. It will inspect and weigh each new situation and then, barring an atrocious human maneuver, will agree to accept the idiosyncrasies of its human associates.

The child is often amazed to see the cat's reaction upon transfer from city dwelling to country home, but he will learn a useful lesson as he watches the cat carefully survey its surroundings and adapt itself to a new environment. Subconsciously the young person may come to appreciate that rigidity of mind makes for many sore human hearts.

Cat as a leader The capacity for leadership may be inborn, but insofar as education plays a role in this quality the cat is an illuminating teacher for the growing youngster. In an apartment or a farmstead, where the cat is only one of a number of species of animals, time will usually find the cat master of the household. It gains this position by combinations of the velvet glove and sharp claw. Except for special breeds of dogs who are death on cats, the average canine quickly comes to respect the superior wisdom and authority of the cat in matters of distribution of space, food, and family affection. The cat shows equal skill in training man, though it requires time and patience for a cat to bring up a human being as has been beautifully pointed out by Elmer Davis in his essay, "Being Kept by a Cat."

It may be harsh medicine for the learning child to have such a strict teacher, but at some time in his development he must come to understand that there are many persistent, single-minded, purposeful, ambitious, even aggressive people in this world to whom he must accommodate himself. Only time will determine his particular niche in the human hierarchy, but as he contemplates the cat's tactics and accepts or rejects its methods, he will be watching a master of survival and leadership in action.

Cattiness of humans weighed against the humanoid qualities of the cat There may be some readers who cannot accept the notion of the cat's worthy fellowship in the society of educators. Such readers may even doubt the effectiveness of an educational process that is currently symbolized by teacher and student sitting on opposite ends of a log, just larnin' from each other. If, however, the skeptic would soften his resistance, he might find the cat an inexpensive source of wisdom and an untapped teaching potential for a sympathetic and worthy household. Dress it up as we will, the major aim in education is to bring out the latency of each individual and to assist him toward the rewards of maturity and wisdom. Certainly maturity and wisdom per se cannot be engrafted on the student mind by textbook teaching. Educators have long grappled for precise definitions of maturity. Professor John Findley has defined it as "the capacity to endure uncertainty." Uncertainties may arise partly from natural and partly from human events. Since man's egocentricity usually plays a major role in human events, it is important that the young person become aware of, and learn to live with, the spectrum of the egocentricities of others.

As the growing child observes the cat's response to new environments, its egocentricity, resistance to conformity for conformity's sake, insistance on privacy, pursuit of excellence, qualities of leadership, and its commended persistence, he will be viewing many of the ingredients of maturity, at least those ingredients that make it possible to be an acceptable member of the human race.

Some may ask, "Is it wise to expose a child to a cat who 'walks by itself'? " but do not most men walk by themselves? The cat teaches the child that one cannot have a friend without being a friend in turn. The good life consists of reciprocal, balanced relationships, and the cat, unlike the dog, is the reasonable facsimile of human beings that the young person will be meeting the rest of his life, like it or not.

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EDITORIALS

The University in the Community

In a 1966 editorial in *Science*, John W. Gardner stated: "Every great university must balance its responsibilities to the worlds of reflection and action . . . A society that aspires to creativity has urgent need of its detached scholars and critics, as well as those who will become deeply involved in the world of action . . . The life of reflection is not superior to the life of action, or vice versa. Both are essential to a vital society."

The university is concerned with developing an educational environment that inspires scholars, critics, and individuals to assume leadership in the world of action.

The medical schools and hospitals must balance their responsibilities to the worlds of reflection and action through a medical education system that produces both the clinicians and practitioners, who are usually concerned with providing services, and the scholars and investigators, who create new techniques and develop new approaches. This duality of purpose needs to be directed toward improving the health status of our society.

The health care delivery system has been the subject of extensive written and vocal criticism in the last decade. Although a large volume of federal legislation has been enacted to improve the ways in which health services are delivered, the problems involved in attempts to modify the system are complex, and the facts on which to base decisions, formulate plans, or seek solutions often are lacking.

These limitations make it essential to continue to question the relevance of the delivery system if dynamic new approaches are to be developed and new ideas to be tried. A university can dare to tread new paths, to try new approaches in the delivery of health care, or generate alternatives. It can test and evaluate the relative effectiveness of these alternatives. It is this quality of daring that appeals to the young health worker, and to which he would like to direct his energies. When tempered by critical analysis, it provides the ambience in which the very best teaching takes place. This is exactly what the Harvard Medical School is attempting to do through a variety of mechanisms discussed in the accompanying articles in this issue.

Dr. Alfred M. Haynes, in the March 1970 *American Journal of Public Health*, reported that health professionals and health institutions must abandon the posture of specialism and isolation in order to become more relevant, and that the relation between the health professionals and the community needs to be a symbiotic one: consumers should share in the development and implementation of the health program for all; the community is hardly justified in asking for more; professionals should hardly be satisfied in giving less.

If the university is to serve its role as innovator, organizer, catalyst, and critic of the delivery system of community medicine, it must find effective ways of interacting with the community. Indeed, this intervention is an area in which daring and courage are required, and in which the community must play a vital role. Communities have their own personalities just as universities do, and a satisfactory relation seems to be based as much on human understanding and intuition as on formal administrative skill.

In fact, the future of community medical programs may well depend on our ability to effect a working relation between the providers of health care and the communities served.

Paul M. Densen,
Director,
Center for Community Health
and Medical Care

Felis Catus Praeceptor?

The educational capability of the cat, in contrast to that of the dog, is an unusual subject for this or possibly any other alumni bulletin to discuss, but the editors try to make a small specialty of the unusual. Even Harvard Medical alumni, or some of them, can appreciate an occasional excursion into the unusual; an additional dividend is the opportunity, not often available, of being favored with a husband and wife contribution.

The temperamental differences between cats and dogs is well known. The dog is an extrovert, effusive, openly affectionate and not unduly neat in its habits. The cat, with a great capacity for adaptation, accepts kindness with its customary reserve and shows its appreciation by purring. The dog, outgoing, wags its tail when pleased; these are characteristic expressions that in themselves provide no indication of either educability or pedagogic aptitude.

A few definitions culled from Webster give some evidence of the importance of each species; in a military context "dogface" represents the infantry and "dog fight" suggests the air force; unpleasant associations include the doghouse and the dog-in-the-manger. A clerical usage is that of the parson's dog collar, worn even in the uncomfortable dog days.

"Cat" presents connotations equally varied and sometimes inexplicable. The catfish is at least edible, which the dogfish is not; to "cat" an anchor is to bring it up to the cathead of a vessel, but not necessarily a catboat. A cat tail is the familiar blossom and stalk of a tall wetland reed; the cat o' nine tails, on the other hand, consists of nine knotted lines with which offenders were once flogged. A cat walk is a narrow elevated footway, a catcall is any loud or raucous cry (like a caterwaul, associated with mating or moonlight); catwitted, according to

Webster, is "like a cat mentally, or in being unteachable, spiteful, conceited or the like" — not at all the impressions that the Seegals wish to create in their article published elsewhere in this issue of the *Bulletin*.

It is, nevertheless, the Seegals' concept of the cat as a contributor to human education that inspired the current editorial interest.

Carr*, an authority on cats in general, admitting that cats and mystery are synonymous, traces their origin back to *Miacis,* " a vicious, weasel-like little carnivore with a long body and short legs that existed on the earth about fifty million years ago." He makes a case for the general docility of the cat family, especially the timid lion (see The Wizard of Oz), whose roar is considered to be only an amplified purr; he stresses the affectionate amiability of the tiger and notes that mountain lions make excellent pets. Mating and cross mating — "cross fertilization" as captains of industry like to call their mating of ideas — has produced the *Felis catus* of Linnaeus "the great commonwealth of catdom which knows no law but the sovereignty of the individual." To this commonwealth belong the short-tailed Manx, the long-haired Persian, once called Angora, the hairless Mexican, and the Siamese that screams like a catamount.

The legend that cats suck the breath from babies, to the detriment of the infant, has been denied by no less an authority than Morris Fishbein.

Cats are conspicuous for their neat and fastidious habits, as witness the unchallenged story of the guide who was demonstrating the barrens of some western state to an Eastern greenhorn when a bobcat suddenly sped by with the speed of lightning and disappeared over the distant horizon. "Heavens," said the New Englander, or words to that effect, "What goes on?" "He just had a call of nature," said the guide, "and has to go 15 miles to find enough dirt to cover it." Even dirt has its uses.

The best that can be done with dogs is to teach them to use the neighbor's lawn instead of one's own.

Whether the cat or the dog is the better teacher and more generally intelligent is a moot question because of their utterly dissimilar personalities. Certainly cats seldom embarrass through their demonstrativeness; they don't learn tricks easily, being averse to such exploitation. They seem to have had throughout history alternate periods of being generally loved and generally hated. There is a plausible theory that in medieval times pogroms of cats were succeeded by great epidemics of pestilence. Man killed the cats that killed the rats that sowed the seeds of plague. If this is true then cats have been responsible at least for a practical lesson in preventive medicine.

* Carr, W. H. A. *The Basic Book of the Cat.* Charles Scribner's Sons, New York, 1963. 224 pp.

Along the Perimeter

BC Joins HMS in Nurse Specialist Program

The Macy Program was officially established on 11 May 1970 when a Memorandum of Understanding was ratified between Boston College and Harvard Medical School. It represents the first institutional collaboration in the area of maternal-child health care. Funded by the Josiah Macy, Jr. Foundation, the Program is a joint effort between Boston College School of Nursing, department of maternal-child health nursing; Boston College Graduate School; Harvard Medical School, department of obstetrics and gynecology, and of pediatrics; Boston Hospital for Women; and The Children's Hospital Medical Center.

Due to the major changes needed in maternal-child health services, the goal of the Program is to expand the traditional practices of the nurse to make possible a viable system of complete health care to mothers, infants, and children through the preparation of nurses who can function as clinical specialists in a collaborative relation with the physician.

Educational and clinical experiences have been added to the present maternal-child health program at BC, and the finished curriculum will begin in September 1971.

Dr. Howard N. Jacobson, associate professor of obstetrics and gynecology, is director of the Program; Miss Teresa Chopoorian, R.N., M.Sc., assistant professor of maternal-child health nursing at BC, is co-director.

Dr. Jacobson stressed the importance of a close association between the education of nurses and medical students. "Educational concurrency," he said, "is necessary to teach both the nurse who is a student of this program and medical students their complementary roles in health care."

Career Continues

To paraphrase Gertrude Stein, a professor is a professor, is a professor. So it is with Arthur T. Hertig '30, who was Shattuck Professor of Pathological Anatomy from 1952-1970, and is now professor of pathology at HMS.

Although Dr. Hertig has reached the age when formal retirement from academic and research pursuits at Harvard usually becomes mandatory, he has embarked on a new career at the New England Regional Primate Research Center in Southborough as professor of pathology and chairman of the division of pathobiology. At the NERPRC, he is devoting his time "to the morphology of primate ovaries, and other related problems."

Scientific understanding of the early human embryo is to a great extent the result of Dr. Hertig's definitive work. He was able to bypass the inherent difficulties in obtaining specimens for direct observation by searching for early conceptuses in the removed uteri and Fallopian tubes of selected patients coming to operation, and has recovered more than 30 early embryos for histochemical and developmental studies. On the basis of these observations, Drs. Hertig and John Rock described the stages of human embryological development from the first division of the ovum until placental circulation becomes functional.

This work won Dr. Hertig two awards — one from the American Gynecological Society and another from his alma mater, the University of Minnesota. The Outstanding Achievement Award from the University cited him as "world famous for his contributions to the study of human embryology."

Although he is best known for his embryological studies, Dr. Hertig has made several other notable contributions to reproductive pathology. His investigations of hydatidiform moles are highly regarded by both pathologists and clinicians. He has also done significant work on the pathogenesis of carcinoma *in situ* of the cervix and of endometria undergoing malignancy. Other investigations have included work on ovarian tumors, the pathogenesis of spontaneous abortion, habitual abortion, traumatic abortion, placenta accreta, and the premature separation of the placenta.

Professor Emeritus

Sidney Farber '27, who for more than three decades has been concerned with the care of children with cancer and research in the field of the chemotherapy of cancer, has become the S. Burt Wolbach Professor of Pathology, emeritus.

Widely recognized as the world authority on cancer in children and as the founder of the discipline of modern pediatric pathology, Dr. Farber has advanced frontiers in cancer research. His definition, more than 30 years ago, of the total care of children with cancer, and his discoveries in the chemotherapy of cancer have been regarded as two of the great milestones in the opening of a new era in cancer research and care. His major contributions include the discovery that several chemicals limit the growth of many kinds of cancer cells, and are responsible for prolongation of life and actual cures of some previously incurable cancers. He helped to initiate extensive national and world research programs on the chemical treatment of cancer. He established the first hospital and research institution devoted exclusively to the care of children with cancer — the Children's Cancer Research Foundation. Since the Foundation's inception, Dr. Farber has served as scientific director, coordinating extensive research programs on cancer chemotherapy, surgery, and radiotherapy.

Dr. Farber was named chairman of the Staff Planning Committee for the development of The Children's Hospital Medical Center in 1946, and a year later he became pathologist-in-chief and chairman of the Division of Laboratories and Research. His leadership gave rise to the definition of the modern Children's Medical Center and is accredited with much of the great expansion of the CHMC since World War II, and for the integration of hospital services with programs of research, teaching, and patient care directed toward the total care of the young hospital patient.

Letters

Civil Defense

To the Editor:

I was unable to get to the Alumni meeting this spring, but the latest *Bulletin* indicates that it was a gutsy experience for all parties concerned. This letter is only a vote of one for the kind of report that it brought to the alumni of the great exchange that is taking place on the campus, between the students and faculty on a wide range of problems. Everyone who reads the report has his favorites and disagrees with some of the statements made. What I want to commend is the people who made this program possible, and there must have been a hell of a row behind the scenes to put this show on for everyone to see. This is what makes the HMS Alumni Association great, for it was our production.

One begins to feel the polarization in academe. There are those who feel that the University has as its main function to teach and to be a repository of knowledge, and a source for the development of new ideas; there are others who believe that the University has meaning only as it shapes its policies to the solution of immediate problems.

The University derives from the Middle Ages where it was an institution set apart from the mainstream of current life, where scholars lived quietly. In this sense, the University is the Erasmian ideal of sitting in a garden with friends and talking through the twilight, as the ultimate of human pleasure.

Some of our activists today see the University as enormously engaged in solution of immediate problems such as pollution; and getting right in there by forcing the legislators to pass laws that will clean the air over Boston in 12 months. "Be activist" is the cry.

Rather than take sides, I would like to compliment the *Bulletin* on making us realize that there is a vital debate taking place on the

campus, and you are sharing it with us. It might help to gain readers by presenting controversial subjects with such impartial editing as you managed for the Alumni report.

ROLF LIUM '33

To the Editor:

Three years ago, driving home after attending the HMS Class Day programs and my own Class Reunion, I remarked to my wife that I had never ceased feeling grateful for the privilege of attending and graduating from Harvard Medical School. Today I couldn't care less.

After reading in the current issue of the *Bulletin* the reports of this year's Class Day program, I am sure that I would not have been able to endure the stench of the oral flatus being emitted on the platform. While protesting that current medical education is not relevant to contemporary social needs, the Class of '70 apparently was preoccupied with political issues wholly irrelevant to medical education.

The very existence of a "HMS Strike Steering Committee" attests to the chaos prevailing in the Dean's office. The distorted, falsified, arrogant "demands" presented by Mr. Spiegel were as completely out of order as they were vicious. Only a totally misinformed individual would publicly assert, "Police beat and kill almost at will." Thank God that there is at least one — David J. Greenblatt '70 — who knows better.

It is not surprising that alumni support of HMS is falling off to a significant degree. Fortunately for the School it has never had to depend upon my contributions, for like Dr. W. Peterson '63 (with whose letters to the *Bulletin* I am in complete agreement), I will no longer contribute anything to the Harvard Medical Alumni Association. Like him I cannot support the blatant and one-sided political viewpoints that the School not only condones, but seems actively to encourage.

ALDEN W. SQUIRES '32

To the Editor:

A form letter from Dean Ebert received a few months ago indicated that trouble was brewing in the student body of the Harvard Medical School, but I was really amazed when I read the speech made by David Spiegel at the Alumni Day exercises in May.

Is it true that the officials of HMS have allowed students to organize a strike committee and, if so, how does it happen that they have time to attend meetings of such lawless criminals as the Black Panthers and other so-called dissident groups who do not choose to obey the laws of our country?

Apparently David is another highly excitable youngster who received much of his knowledge from the wrong sources and always wants to be where the action is, as at the "police riot" in Chicago and the ridiculous journey to Washington along with a group of some 200 others to hold a demonstration on President Nixon's doorstep.

He obviously is not much interested in the study of medicine and should be encouraged to drop out of school and devote all of his time to the things that he enjoys.

CHARLES L. MARTIN '19

To the Editor:

I am submitting the following letter, which I am addressing to David Spiegel '71.

"When I first read your article, 'Why We Strike,' I was angry. So angry, I was about to inquire of someone, 'Why tolerate, why nourish physically, educationally, an avowed anarchist in the Harvard Medical School; a man whose plan, whose conspiracy, seems to be to destroy our society?'

"Then I reread the article and, though ardent American I am, I softened. I want to give you the benefit of the doubt, suspecting that perhaps you really are striving to prod us into working for an improved social structure; for upgrading minorities, banishing warlike preparations, and in so doing, banishing war across the face of our planet. Your praise of the good things you state the Black Panthers stand for pleased me for, do they not paint themselves at variance with those aims by their acts of violence, thus misleading us?

"Perhaps you truly are altruistic, compassionate, rather than acting from indoctrination in alien and radical American anarchistic philosophies.

"But, David, certain portions of your speech, as recorded in the July-August issue of the *Bulletin*, damage such conclusions. Let me comment on several of them, by way of inquiry.

"To your DEMAND ONE: Would not an immediate withdrawal of all forces from Southeast Asia precipitate a blood bath which could make combat and civilian casualties suffered already a trifling affair in comparison? Of course, we have trained South Vietnam to defend herself — that is, against her own nationalistic foes. But suppose the greater communist nations entertain other designs?

"DEMAND III: Before doing what you suggest, 'end defense research, ROTC, counter-insurgency research, and all other such programs,' let's be darned sure before we bare our chests to a still voracious world that other nations do likewise. I hope, David, it's not because actually you would like us to become easy prey to our Cold-War enemies so that we then could dwell under their altruistically benign, gracious governments, replacing our own harshly repressive one? Do not smile, David. You know, it's because of our more extended background.

"We, for instance, who are of World War II vintage, well recall the outright blustering cockiness of Soviet soldiers while still embracing us at the capitulation of Berlin. Enlisted men and officers alike made it clear that now the earth was their plum.

"First, the Near East, then Asia, Africa, and South America, the U.S., then remaining as an island in a hostile world — a sitting duck! Not their exact language but their avowed design. And they would do it by subversion, by indoctrination, infiltration, espionage.

"Quite a chunk of that is already in the bag.

"You can scarcely blame us Americans somewhat older in years than even you post-grad students, for entertaining some lingering queries as to what the actual prime motivating movements are lying behind all this youthful revolt.

"And then your statement, 'It is up to us and the rest of the world to protect ourselves from our government,' leads me to believe you do possess a revolutionary, un-American bias.

"If you are sincere in wishing a reformation, get with your government, David, not against it. Present some arguments to your congressmen; to various widely read periodicals; to the President himself — constructive arguments, not inflammatory ones. You may not believe it, but reasoning people do listen to reason. Large bodies notoriously move slowly; but change should come just as rapidly, and much less dangerously, than the methods you suggest in your speech."

CLARK YOUNG '21

The above letters were forwarded to Mr. Spiegel who offers the following comment.

To Drs. Martin and Young (or should I say Charles and Clark):

My first reaction to these two letters was a sense of discomfort at their pervasive tone of condescension. They questioned not only my ideas, but also my motives, my maturity, and even my dedication to medicine. Sadly, it is becoming increasingly common to rebut ideas with insinuation. But, if we are to question motives, why is it always those of the challenger? Why do we not wonder about the motives of those who can watch the daily murder in Vietnam on their television sets, who can see people starve while we pay to destroy food, who can see separate standards of medical care for the rich and poor without so much as a loss of appetite?

You suggest that I reason with my government. You know me only from this talk, but I have not come to these ideas easily. I have written repeatedly to congressmen, I have had letters "published in widely-read periodicals," I have telegramed the President and received form letters in reply full of a similar kind of condescension. I am even embarrassed to admit that I campaigned for the peace candidate in 1964 — you may remember him — Lyndon Baines Johnson. Yet the longest war in American history continues. How much blood must flow before we lose patience with our government? You seem to focus on the threats to us from the outside. I believe, sadly, that the greatest threat to our freedom is in our own government because I see that the greatest perpetrator of violence in the world now is the United States. It would violate everything I believe in to be "with" a government like that.

As for specific objections, Demand one: the Bloodbath theory on withdrawal has little to support it. At least let us terminate the bloodbath we have been inflicting — over one million Vietnamese casualties in our name, one third of South Vietnam in "relocation camps." If we are so worried about Vietnamese lives (a new departure) then we can offer sanctuary here to anyone who desires it.

Demand three: red-baiting is not a new trick, and even lacking a more extended background I can recognize it. It is time we stopped using our enemies' faults as excuses for our own. Further, we already possess the capacity to destroy the world many times over. Our real security rests in stopping the plundering of the world's resources and lives for our own use.

You refer to the Black Panthers as "lawless criminals." I take it this terminology comes from the press, which has rarely treated them objectively. Although many members of the Black Panther Party have been arrested, in most cases the charges were later dropped. The police murder of Fred Hampton and Mark Clark in Chicago is a good example. The others in the apartment were arrested on charges of firing on the police. The same district attorney who lauded police conduct in the raid later dropped charges against the others for "lack of evidence." A few members of the Party have actually been tried and convicted of crimes, most recently one in New Haven. But even with these convictions Yale President Kingman Brewster has questioned whether a Black Panther could get a fair trial anywhere in America. And before you throw the term "lawless criminal" around so quickly, think about who might more appropriately bear the term — Fred Hampton or the policemen who murdered him in his sleep?

Finally, look again at Dr. Martin's letter. It is a good example of the atmosphere of repression descending on this country. He would have me "encouraged to drop out" of medical school for my beliefs. Is this the level on which dialogue should be conducted in a country which calls itself free? I am quite interested in the study of medicine, Dr. Martin. Many of us feel that good medicine involves preventing needless death as well as curing disease. It is time that we start looking beyond the end of our stethoscopes.

DAVID SPIEGEL '71

book REVIEWS

L. J. Henderson, on the Social System, Selected Writings. Edited and with an introduction by Bernard Barber. The University of Chicago Press, 1970. 260 pages. $11.50

Within the past several years, L. J. Henderson has been mentioned at three memorable meetings that I have attended. First, when the Harvard Medical School was sponsoring that excellent series of Lectures on the History of Medicine and Rene Dubos came to captivate us with his thoughts on the present environment. He told us that he believed L. J. Henderson was the greatest man on the Harvard Medical School faculty in the first part of the 20th century and referred to Henderson's influence on him.

Second, last year, Henry R. Guerlac, professor of the history of science at Cornell, in the Horblit Lecture, sponsored by the History of Science department, told us about the red-haired biochemist and his profound effect on the sociology and history of science.

Third, at the home of Harrison Horblit, with a group of graduate students, surrounded by that most magnificent collection of books and manuscripts on the history of science, Mr. Horblit spoke of Henderson's influence on him in developing an interest in science and consequently the literature of science.

L. J. Henderson (1878-1942) was a distinguished biochemist who was professor of biochemistry at both Harvard College and Harvard Medical School. After graduating from HMS in 1902, he went to the University of Strasbourg for further study and research in chemistry, especially in the newly-emerging field of biochemistry. He returned to Harvard and climbed the academic ladder. Although he never practiced medicine, Henderson had a great knowledge of, and influence on, the scientific medicine that developed during his lifetime. He always admired a certain kind of medical man — the decisive therapeutist who based his judgments on a combination of science, experience, and intuition and who was reflective about his own behavior. He felt that there were many such men among his colleagues and friends in the Harvard-Boston community.

In the field of biochemistry Henderson was a researcher, an original discoverer, and a philosopher. He became interested in the mechanisms of neutrality regulation in the animal organism, and he brought to these physiological problems the knowledge and techniques of chemistry and shed a great new light on them. In 1908, as a part of his work in this area, Henderson presented a precise mathematical formulation of the acid-base equilibrium. He was active in biochemical and physiological research until the late 1920's, and his work culminated in 1928 with the publication of *Blood: A Study in General Physiology*. Henderson was a member of that group of great physiologists: I. Pavlov; J. B. S. Haldane; Walter B. Cannon; and Joseph Bancroft, who elaborated Claude Bernard's concept of the "internal environment."

Henderson extended his methodology into the philosophy of science. He wrote on the relationship of the organism to the environment in *The Fitness of the Environment: An Inquiry into the Biological Significance of the Properties of Matter* (1913), and on the relation of teleology and determinism in *Order of Nature: An Essay* (1917). Perhaps his most lucid writing of a philosophical nature is his introduction to Claude Bernard's, *An Introduction to the Study of Experimental Medicine.*

In the late 1920's Henderson was encouraged to read Pareto's *Sociology* (1917) by his Harvard colleague William Martin Wheeler whose classic studies of insect societies had led him to become interested in Pareto's analogies of human societies. Henderson became an enthusiast of Pareto and for the rest of his life he devoted his time to social science. George Wald noted in his introduction to the paperback edition of *The Fitness of the Environment,* "He [Henderson] began bringing physical chemistry to biologists, and ended bringing Pareto to sociologists."

In 1927 Harvard set up the Fatigue Laboratory at the Harvard Business School to study physical and mental stress. As the first director of this laboratory, Henderson sponsored both physiological and social research.

One of the leading themes of Henderson's work is medical sociology. For him, the necessary and desirable relations between medicine and the social sciences were two way, each influencing the other, as he says in the essay, "The Relationship of Medicine to the Fundamental Sciences," reprinted in this volume. "The practice, teaching and science of medicine have never been isolated from the other affairs of men, but have modified them and been modified by them." This article presents a fundamental rationale for a sociological history of medicine and for a sociology of medicine. It is itself an important chronicle for the kind of sociological history of medicine in the United States that will some day be written. Another article written the same year (1935), "Physician and Patient as a Social System," has had considerable influence on the sociology of medicine, particularly because of its influence on Talcott Parsons, the great medical sociologist. According to Russett in *The Concept of Equilibrium in American Social Thought,* "Henderson may have given greater impetus to the diffusion of equilibrium concepts among American social scientists than any other single individual. To a whole generation of Harvard students he passed on his conception of scientific method, of social science methodology, and specifically of the place of equilibrium analysis in social science."

This book has a good biographical account of Henderson and reprints his "Sociology 23 Lectures" and other sociological essays. It will be of particular interest to the Harvard alumni who remember him, to medical sociologists, and to that band of medical historians still trying to bridge the gap of the Art and Science of Medicine. The mark of the man's greatness is that he could influence scientists, historians, book collectors, and doctors.

GEORGE E. GIFFORD, Jr., M.D.,M.A.

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Abramson, Steven B.
Peekskill, N. Y. (Dartmouth)

Adams, Warren J.
Fairfield, Wash. (Washington State U.)

Allegra, Donald T.
Hawthorne, N. J. (Coll. of the Holy Cross)

Alpern, Louis M.
Pittsburgh, Pa. (Columbia)

Arneson, Wallace A., Jr.
Sioux Falls, S. Dak. (Carleton)

Austin, Erle H., 3d
Norfolk, Va. (Dartmouth)

Baker, Christopher C.
Laconia, N. H. (Williams)

Baynes, Walter J.
Springfield, Mass. (Dartmouth)

Beckett, Timothy F., Jr.
Trumbull, Conn. (Harvard)

Berger, Lawrence R.
Jamaica, N. Y. (Harvard)

Blumenthal, David
New York, N. Y. (Harvard)

Bogojavlensky, Sergei
Stow, Mass. (Harvard)

Bojar, Judith E.
Chestnut Hill, Mass. (Radcliffe)

Bradley, Peter P.
Philadelphia, Pa. (Williams)

Bringhurst, F. Richard
Ocean City, N. J. (Princeton)

***Broisman, Howard P.**
Linden, N. J. (Rutgers)

Brooks, Barry H.
Painesville, Ohio (Hiram)

Bruce, Calvin S.
Milwaukee, Wisc. (Harvard)

Burke, Jack D., Jr.
Richmond, Va. (Harvard)

Cabaj, Robert P.
Chicago, Ill. (U. of Notre Dame)

Calkins, David R.
Shawnee Mission, Kans. (Princeton)

Cane, Edward M.
Long Beach, N. Y. (Cornell U.)

***Carter, Paul C.**
Kenmore, N. Y. (State U. of N. Y., Buffalo)

Chin, Kenneth W.
Hollis, N. Y. (Columbia)

Civin, Curt I.
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Clark, Mark W.
Hampton, Va. (Columbia)

Cogan, Martin G.
Woodland Hills, Calif. (Stanford)

Cooper, Stephen F.
East Meadow, N. Y. (MIT)

Cramer, John F., 3d
Portland, Oregon (Harvard)

*Harvard School of Dental Medicine

Czulewicz, Andrew J.
Wilton, Conn. (Harvard)

Dash, Harold
Wyncote, Pa. (Amherst)

DeHaven, Joseph W.
Kettering, Ohio (Ohio State U.)

DeMaria, Alfred
Revere, Mass. (Boston U.)

Deutsch, Mary A.
St. Louis, Mo. (St. Louis U.)

Dudnick, Paula R.
Pleasantville, N. J. (Brandeis)

Eisenberg, Frank
Oradell, N. J. (Harvard)

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Fallon, Paul A.
Medford, Mass. (Boston Coll.)

Feinsod, Fred M.
Roslyn, N. Y. (U. of Michigan)

***Ferraro, Nalton F.**
Schenectady, N. Y. (Coll. of the Holy Cross)

Fink, David J.
Millburn, N. J. (Yale)

Finkelstein, Seth P.
Jenkintown, Pa. (Haverford)

Fleischman, Roger A.
Philadelphia, Pa. (Harvard)

Fleischnick, Ellen A.
West Orange, N. J. (MIT)

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Washington, D. C. (Barnard)

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Garay, Stuart M.
Searingtown, N. Y. (Columbia)

Germain, Ronald N.
White Plains, N. Y. (Brown)

Gibbs, Harry R.
Rutherford, N. J. (Rennselaer Polytech. Inst.)

Gilbert, Beverly C.
Memphis, Tenn. (Vassar)

Gilbert, Stewart L.
Tulsa, Okla. (Langston)

Giron, Jose, A.
Newton, N. J. (Yale)

Goldman, Howard H.
Bloomfield Hills, Mich. (Brandeis)

Gould, John H.
Falmouth, Mass. (U. of Massachusetts)

***Greene, Roderic R.**
Syracuse, N. Y. (Union)

Greenfield, Michael S.
Oceanside, N. Y. (Clark Univ.)

Griffin, Francis L.
Petersburg, Va. (Amherst)

Hall, Robert E.
Cohasset, Mass. (Princeton)

Hammond, Peter R.
Downsville, N. Y. (Harvard)

Harden, Harold W., 3d
Dallas, Texas (Yale)

Harrison, H. Robert
Great Neck, N. Y. (Yale)

Harper, Morris E.
Grifton, N.C. (Howard)

***Higginbotham, David J.**
Salt Lake City, Utah (U. of Utah)

Higgins, James T.
Livingston, N. J. (Harvard)

Hobbs, Eleanor T.
North Hills, Pa. (Radcliffe)

***Hocevar, Richard A.**
Saulte Ste. Marie, Mich. (Harvard)

***Howard, Benjamin F.**
Pulaski, Tenn. (Tenn. State U.)

***Inglis, Craig M.**
Freeport, N. Y. (Harvard)

Jaffe, Kenneth M.
North Miami Beach, Fla. (Tufts)

Johns, Janet F.
Grand Rapids, Mich. (Wheaton Coll., Ill.)

Jones, Rita M.
Camden, S. C. (Oberlin)

Kane, Joseph A.
Skokie, Ill. (Oberlin)

Kesselman, E. Neil
Denver, Colo. (U. of California, Berkeley)

Kimberly, Robert P.
New Haven, Conn. (Princeton)

King, Talmadge E., Jr.
Darien, Ga. (Gustavus Adolphus)

Kirkman, Robert L.
Montville, N. J. (Yale)

Kirshenbaum, Howard D.
Westfield, N. J. (Harvard)

Klein, Kenneth B.
Rockville, Md. (Harvard)

Koh, David
Bound Brook, N. J. (MIT)

Kreiss, Kathleen
Princeton, N. J. (Radcliffe)

Kuch, Jeffrey H.
Philadelphia, Pa. (Princeton)

Lange, Louis G., 3d
Baltimore, Md. (U. of Rochester)

Lee, Ferrol J.
New Orleans, La. (Harvard)

Likavec, Matt J.
Lakewood, Ohio (Coll. of the Holy Cross)

Registration in the Faculty Room

Lipson, Lewis C.
Bronx, N. Y. (Harvard)

Lu, Christopher Y-H.
New Brighton, Minn. (Haverford)

Macdonald, Martha J.
Rumson, N. J. (Wellesley)

Maguire, James H.
Washington, Pa. (Princeton)

Margulies, Alfred S.
Norfolk, Va. (Univ. of Virginia)

Marsh, James D.
Northbrook, Ill. (Harvard)

Mauritson, David R.
Tulsa, Okla. (Westminster Coll., Missouri)

Max, Mitchell B.
Jersey City, N. J. (Yale)

May, Lawrence A.
Brooklyn, N. Y. (Harvard)

McCabe, Joseph T.
West Paterson, N. J. (Harvard)

McDaniel, Willie R.
Haines City, Fla. (U. of Kansas)

McDowell, Robert L., Jr.
Baltimore, Md. (Harvard)

McFadden, Martha H. F.
New York, N. Y. (Wellesley)

McManama, George B., Jr.
Belmont, Mass. (Harvard)

Meltzer, Richard S.
White Plains, N. Y. (Harvard)

***Mittendorf, Robert L.**
San Bernadino, Calif. (Ohio State U.)

***Montgomery, William M.**
Waynesburg, Pa. (Bucknell)

Moore, Jacqueline P.
La Grange, Ga. (Spelman)

Moore, Patricia H.
Asheville, N. C. (Wellesley)

Mulley, Albert G., Jr.
Wilmington, Mass. (Dartmouth)

Najarian, Thomas
Rockland, Mass. (MIT)

Nelson, Catherine M.
Dover, Mass (Northeastern)

Newburger, Jane A. W.
Bronxville, N. Y. (Bryn Mawr)

Newburger, Peter E.
Scarsdale, N. Y. (Haverford)

***O'Neil, Gerald T.**
Northampton, Mass. (Harvard)

Patterson, Bentley L.
Salem, Va. (Spelman)

Peters, Charles
Indianapolis, Ind. (Princeton)

Piotrowski, Victor M., Jr.
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Pogue, Velvie A.
Vivian, La. (Southern U.)

Polansky, Jon R.
Lynbrook, N. Y. (Harvard)

Ponn, Ronald B.
Belmont, Mass. (Harvard)

Poppema, Suzanne T.
Center Barnstead, N. H. (U. of New Hampshire)

Pruitt, Amy A.
Gary, ind. (Cornell U.)

Raker, Edmond J.
Concord, Mass. (Harvard)

Rivera, Richard
Pueblo, Colo. (Southern Colorado State Coll.)

Rose, Christopher M.
Lawrence, N. Y. (MIT)

Rose, Richard M.
Chicago, Ill. (Yale)

Ross, Margaret S.
South Orange, N. J. (Bryn Mawr)

Russell, Anthony H.
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***Satin, Sol**
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***Sauer, George J. R.**
Medfield, Mass. (Dartmouth)

Schwartz, Richard S.
New York, N. Y. (Harvard)

Scott, William C., 2d
Wilkes-Barre, Pa. (Princeton)

Sherwin, Stephen A.
Great Neck, N. Y. (Yale)

Silver, Jonathan E.
Rye, N. Y. (Harvard)

Silvestri, Ronald C.
Somerville, Mass. (Brown)

Sims, Richard V., 3d
Summit, N. J. (Amherst)

Singer, Daniel E.
Brooklyn, N. Y. (Yale)

Singleton, Gloria E.
Macon, Ga. (Spelman)

Sitrin, Michael D.
Detroit, Mich. (U. of Michigan)

Speller, Jeffrey L.
Philadelphia, Pa. (Haverford)

Stanley, John R.
New Rochelle, N. Y. (Cornell U.)

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Stark, Robert M.
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Sudarsky, Lewis R.
West Hartford, Conn. (Harvard)

Taylor, Charles D.
Martinez, Calif. (U. of California, Berkeley)

***Taylor, George W. 3d**
Hampton, Va. (U. of Virginia)

Tenenbaum, Joseph
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Valone, Frank H.
Utica, N. Y. (Hamilton)

Vasile, Russell G.
Jackson Heights, N. Y. (Princeton)

***Vinson, Walter C.**
Freeport, N. Y. (Stanford)

Walfish, Jacob S.
Paterson, N. J. (Yeshiva)

Walker, Alexander M.
San Francisco, Calif. (Harvard)

Weil, Susan C.
New York, N. Y. (Bryn Mawr)

Weller, Nancy K.
Needham, Mass. (Wellesley)

Wick, Michael M.
Fall River, Mass. (Harvard)

Wiener, Isaac
Flushing, N. Y. (Columbia)

Williams, Peter W.
Springfield, Mass. (U. of Pennsylvania)

***Williamson, Robert J.**
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Wilson, John R.
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Yorke, Craig H., Jr.
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Zombek, Joanne
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